

Line 6, change "beam, the device being" to --beam. The device is--.

Line 8, delete "(2)".

Line 9, change "(3), and the" to --The--, and change "(3) being" to --is--.

Line 10, delete "(2)".

Line 11, change "(6), being" to --and--, and change "interferometer" to --interferometer.--.

Delete line 12.

IN THE CLAIMS:

On page 10, delete line 1, and insert:

--What Is Claimed Is--.

Please cancel, without prejudice, claims 1-11 of the underlying PCT application, and claims 1-10 of the revised pages of the annex to the Preliminary Examination Report.

Please add the following new claims:

11. (New) An interferometric measuring device for detecting one of a shape and a distance of a rough surface, the measuring device comprising:
- a measuring probe having a reference arm and a measuring arm;
 - at least one spatially coherent beam gun unit, a beam emitted by the at least one spatially coherent beam gun unit being broad-band and having a short time coherence; the beam emitted by the at least one spatially coherent beam gun unit being divided into a reference beam and a measuring beam, the reference beam being guided through and reflected in the reference arm,

the measuring beam being guided through the measuring arm and reflected on the rough surface;

a first beam splitter for forming a first partial beam and a second partial beam;

a first device for one of modulating a light phase and shifting a light frequency corresponding to the heterodyne frequency of the first partial beam with respect to one of a light phase and a light frequency of the second partial beam;

a superimposing unit for superimposing the reflected measuring beam on the reflected reference beam;

a beam splitting and receiving unit for splitting the superimposed beam into at least two beams and converting the at least two beams into electrical signals, the at least two beams having different wavelengths; and

an analyzer for determining the one of the shape and the distance of the rough surface as a function of a phase difference of the electrical signals, wherein:

the at least one spatially coherent beam gun unit, the first beam splitter, and the first device are arranged in a unit remote from the measuring probe, and

the unit includes a time delay element arranged in a beam path of one of the first partial beam and the second partial beam, the time delay element producing an optical path difference of optical wavelengths of the first partial beam and the second partial beam, the difference being greater than a coherence length of the beam emitted by the at least one spatially coherent beam gun unit.

12. (New) The measuring device according to claim 11, wherein:
the measuring probe is a modulation interferometer.

13. (New) The measuring device according to claim 11, wherein:
the at least one spatially coherent beam gun unit includes a light

source emitting a short time coherent broad-band beam.

14. (New) The measuring device according to claim 11, wherein:
the unit and the measuring probe are coupled to one another via an optical fiber arrangement.
15. (New) The measuring device according to claim 11, wherein:
the unit further includes a second beam splitter that receives the first partial beam and the second partial beam, the first partial beam and the second partial beam being superimposed on one another at the second beam splitter, the second beam splitter forwarding the superimposed beam to the measuring probe.
16. (New) The measuring device according to claim 13, wherein:
the at least one spatially coherent beam gun unit includes a second light source, the second light source having a short time coherent and being broad-band and spatially coherent, the second light source being operable one of for light amplification and as a backup light source.
17. (New) The measuring device according to claim 11, further comprising:
a second device for frequency shifting the first partial beam with respect to the second partial beam, the second device being arranged in the beam path of one of the first partial beam and the second partial beam; the first device and the second device being acoustical-optical modulators.
18. (New) The measuring device according to claim 14, wherein:
the beam splitting and receiving unit includes a spectral device and a downstream photo-detector matrix, the spectral device splitting the superimposed beam into a plurality of wavelengths, the downstream photo-detector matrix selectively receiving the plurality of wavelengths;
the beam splitting and receiving unit is mounted in the unit;